

Prabisha Shrestha

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PROFESSIONAL EXPERIENCE

Graduate Research Assistant

Aug 2019-Dec 2024

Remote Sensing & Ecological Modeling Group, Department of Geography & Environment, UNC-Chapel Hill, NC

- Analyzed household survey data on energy transitions in rural Nepal, with findings currently under review for publication.
- Contributed to fieldwork in ultra-poor communities in rural Malawi, collecting health and air pollution data to assess impacts of biomass fuel reliance. Findings are under preparation for publication.
- Collaborated with EPPSA fellows and mentors, and played a key role in co-authoring a [policy-relevant publication on energy access in Zimbabwe](#) & impact of access to financial services on household energy transition in Africa ([Preprint](#)).

Data Research Assistant (Spatial Analysis of COVID-19 testing data)

July 2020-Sep 2024

Abacus Evaluation, Data Science & Analytics Team, UNC-Chapel Hill, NC

- Led spatial analysis of the COVID-19 testing data to evaluate participant outreach of approximately 89 of the NIH's Rapid Acceleration of Diagnosis-Underserved Populations (RADx-UP) projects.
- Co-authored publications, including a Global T&E report and a [manuscript on the Evidence Academy for the RADx-UP projects](#) and contributed to creating a comprehensive [data profile](#) of RADx-UP projects.
- Developed [web maps](#), [graphs](#) and data briefs to provide actionable insights on community engagement and COVID-19 testing distribution, delivering results to Principal Investigators at NIH and Project Leads for five RADx-UP case studies.

Range and Training Land Assessment (RTLA) Coordinator

Jan 2018-Jun 2019

Colorado State University- ITAM Fort Leonard Wood, MO

- Collected and analyzed field data from 30+ sites to support land management decisions, creating maps to identify high-need areas for mitigating environmental damage in military training lands.
- Managed a geodatabase to ensure spatial data accuracy and quality control for Land Rehabilitation and Maintenance (LRAM) projects across multiple sites.
- Developed standardized reporting frameworks for training sites (bivouac sites, heavy maneuver sites, and helicopter landing zones), providing actionable insights to senior military leadership. The format was adopted as a reporting standard across U.S. military installations.

Research Assistant (Geospatial Program)

Jan 2017-Dec 2017

Kentucky State University, KY

- Processed LiDAR data to estimate and [visualize vegetation height](#) in released mine sites across 7 counties in Eastern Kentucky to assess the success of coal mine reclamation.
- Designed and created a [mapbook](#) to demonstrate land cover change over time (1992-2011) for 53 counties in Kentucky.
- Performed spatial analysis, using a watershed in Eastern Kentucky as a case study, to examine the spatial extent and temporal trends of [land cover change and forest fragmentation](#) to track impacts in heavily coal-mined areas.

Teaching: Taught one introductory and one advanced GIS labs to graduate and undergraduate students.

Mentor: Mentored 2 high school students to use drone and GIS tools for agricultural resource management.

Graduate Research Assistant

Aug 2014-Dec 2016

Southern Illinois University Carbondale, IL

- Utilized [machine learning using Light Detection and Ranging \(LiDAR\)](#) to detect and map concentrated flow paths (CFPs) in more than 300 croplands and validated using ortho-imagery.
- Performed spatial and statistical analyses to estimate lengths and drainage density of CFPs across watersheds in southern Illinois croplands. Utilized regression and predictive algorithms to identify key predictors of CFP characteristics and developed a model to forecast CFP formation based on field and soil conditions.
- Conducted quantitative assessments to evaluate water quality trends in the Kaskaskia River watershed, compiled findings for publication and contributed to a [report](#) submitted to Heartlands Conservancy, Inc.

EDUCATION

Ph.D. in Geography & Environment [CGPA-4.0] University of North Carolina at Chapel Hill, NC	Dec 2024
Graduate Certificate in Impact Evaluation [CGPA-4.0] University of North Carolina at Chapel Hill, NC	May 2022
Graduate Certificate in Business Intelligence [CGPA-4.0] Colorado State University, CO	Dec 2019
M.Sc. in Forestry (Hydrology and Soil Science) [CGPA-4.0] Southern Illinois University Carbondale, IL	Dec 2016
B.Sc. in Environmental Science (major), Public Health (minor) [CGPA-3.7] Asian University for Women, Chittagong, Bangladesh	May 2013

INTERNSHIP

Stanford University: Summer Internship at Herrin Lab & Jasper Ridge Biological Preserve (June-Aug 2012)

TECHNICAL SKILLS

Skill Category	Tools/Technologies	Proficiency Level	Experience
GIS Software	ArcGIS, QGIS	Advanced	7+ years
Programming	Python (Geospatial libraries), R	Intermediate to Advanced	4+ years
Database Management	SQL (PostGIS, Spatial Databases)	Intermediate	3+ years
Web GIS	JavaScript (Leaflet, Mapbox, ArcGIS API)	Beginner	2+ years
Mapping & Visualization	Cartography, OpenStreetMap, Tableau	Advanced	5+ years
Project management	Asana, AirTable, ClickUp, Trello	Intermediate	3+ years

TRAINING & WORKSHOPS

Workshop: Conducted a workshop to inform how Diaspora mapping online survey was conducted and collected data are being managed on Airtable, February 2024.

Training: Conducted two training sessions and developed hands-on labs on “Introduction to GIS” for 15 high- and middle-school students & “Introduction to Remote Sensing” for 25 high-school students, June 2017.

Workshop: Conducted a workshop and led a discussion with 30 local farmers in rural Kentucky to promote the possibilities of diversifying the use of reclaimed mined lands at Prestonsburg, Kentucky, May 2017.

VOLUNTEER

Diaspora [Mapping](#) team, The Great Nepali Diaspora, 2022-Present
Interactive [web map](#) for opioid overdose, UNC-Care, 2023-2024

AWARDS

EPPSA Graduate Energy Fellowship	UNC-Chapel Hill 2021
Institute for the Arts and Humanities Award	UNC Chapel Hill 2020
2020 Professor James Ingram Memorial Summer Research Fellowship	UNC-Chapel Hill 2020
2020 Mingma Norbu Sherpa Fellowship	UNC-Chapel Hill 2020